

CLAIMS

What is claimed is:

1. A system for providing simulation of an integrated circuit during development of the integrated circuit, the integrated circuit having an island **including** an interface, the system comprising:

a snooper coupled with the interface for obtaining an output provided by the island during simulation;

a checker, coupled with the interface, for checking the output to determine whether the output is a desired output;

a generator coupled with the island for providing an input to the island during simulation; and

at least one test case coupled with the generator for directing the generator.

2. The system of claim 1 wherein the checker is coupled with the snooper and wherein the checker receives the output from the snooper.

3. The system of claim 1 wherein the snooper may be reused when the island is integrated with a second island.

4. The system of claim 1 wherein the checker may be reused when the island is integrated with a second island.

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2 5. The system of claim 1 wherein the generator may be reused when the island
is integrated with a second island.

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2 6. The system of claim 1 wherein the generator receives the output and provides
the input based on the output.

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2 7. The system of claim 1 wherein the generator and the snooper are coupled
with the interface, wherein the checker is coupled with the interface through the snooper and
wherein only the snooper and the checker are reused when a second island is integrated with
the island at the interface.

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2 8. The system of claim 1 wherein the at least one test case further provides data
and instructions to the generator.

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2 9. The system of claim 1 wherein the interface is an internal interface.

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2 10. A method for providing simulation of an integrated circuit during
development of the integrated circuit, the integrated circuit having an island **including** an
interface, the method comprising the steps of:

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4 (a) snooping the interface to obtain an output provided by the island during
5 simulation;
6 (b) checking the output to determine whether the output is a desired output;
7 (c) providing an input to the island during simulation; and

S *A* (d) directing the providing of the input using at least one test case.

11. The method of claim 10 wherein step (a) further includes the step of:
(a1) snooping the interface to obtain the output provided by the island during simulation using a snooper, the snooper capable of being reused when the island is integrated with a second island.

12. The method of claim 10 wherein step (b) further includes the step of:
(b1) checking the output using a checker to determine whether the output is the desired output, the checker capable of being reused when the island is integrated with a second island.

13. The method of claim 10 wherein step (c) further includes the step of:
(c1) providing the input to the island during simulation using a generator, the generator capable of being reused when the island is integrated with a second island.

14. The method of claim 10 wherein step (c) further includes the step of:
(c1) providing an input to the island during simulation using a generator, the generator receiving the output and providing the input based on the output.

15. The method of claim 14 wherein the directing step (d) further includes the step of:
(d1) providing data and instructions from the at least one test case to the generator.

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16. The method of claim 10 wherein the interface is an internal interface.

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17. A computer-readable medium having a program for providing simulation of
2 an integrated circuit during development of the integrated circuit, the integrated circuit
3 having an island **including** an interface, the program comprising instruction for:

4 (a) snooping the interface to obtain an output provided by the island during
5 simulation;
6 (b) checking the output to determine whether the output is a desired output;
7 (c) providing an input to the island during simulation;
8 (d) directing the providing of the input using at least one test case.

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18. The computer-readable medium of claim 17 wherein the instruction for
2 snooping (a) further includes the instructions for:

3 (a1) snooping the interface to obtain the output provided by the island during
4 simulation using a snooper, the snooper capable of being reused when the island is
5 integrated with a second island.

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19. The computer-readable medium of claim 17 wherein the instruction for
2 checking (b) further includes instructions for:

3 (b1) checking the output using a checker to determine whether the output is the
4 desired output, the checker capable of being reused when the island is integrated with a
5 second island.

1 20. The computer-readable medium of claim 17 wherein the input providing step

2 (c) further includes instructions for:

3 (c1) providing the input to the island during simulation using a generator, the
4 generator capable of being reused when the island is integrated with a second island.

1 21. The computer-readable medium of claim 17 wherein the input providing step

2 (c) further includes instructions for:

3 (c1) providing an input to the island during simulation using a generator, the
4 generator receiving the output and providing the input based on the output.

1 22. The computer-readable medium of claim 17 wherein the directing
2 instructions (d) further includes the instructions for:

3 (d1) providing data and instructions from the at least one test case to the generator.

1 23. The computer-readable medium of claim 17 wherein the interface is an
2 internal interface.